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HOUSEKEEPERS' CHAT

Tuesday, March 1, 1938

(FOR BROADCAST USE ONLY)

Subject: "MEAT COOKERY QUESTIONS." Information from the Office of Experiment Stations, United States Department of Agriculture.

--ooOoo--

Now that more meat is on the market and meat prices are down, questions are again coming in thick and fast about meat cookery. This week's mailbag contains several inquiries about the best way to roast meat, for example. Experiment stations in several States have been making cooperative investigations of meat cookery, so the answers I have for you today come direct from the laboratory -- are the last word on cooking meat from the scientists.

As a matter of fact, these cooperative studies during recent years have had much to do with changing the way Mrs. American Housewife prepares meat for her family, particularly in the way she cooks roasts. One change is roasting by thermometer. Fifteen years ago workers in laboratories doing meat research were using thermometers. But women in home kitchens never thought of a meat thermometer as part of good cooking equipment. Today thermometers are selling by the hundred to housewives who recognize that they take the guess out of cooking a roast to the rare, medium or well-done stage, whichever the family prefers. Another idea that has progressed to the home from the laboratory is roasting meat at a constant low temperature rather than searing at high heat first and then continuing the cooking at lower heat. Still another change is using an open pan with a rack for most roasts instead of a covered roaster.

Which brings up the first question from the mailbag.

"Please tell me," writes one cautious listener -- "Please tell me what evidence you have that a roast is better cooked at a low even temperature rather than as I have always cooked -- browning the roast first in a hot oven and then turning the oven to medium for the rest of the roasting."

Sounds as if this listener hailed from Missouri. Isn't that the State where the slogan is: "You've got to show me"?

By way of reply, I have some evidence to show from Missouri. Meat investigators at the Missouri State Experiment Station happen to have been among the first to try out roasting with a constant low temperature. After a long series of tests they now say definitely that better results come from steady low-heat roasting than from using a hot oven first and then finishing the cooking with less heat. They recommend a constant temperature of 300 degrees Fahrenheit for beef rib roasts and leg of lamb roasts. (By the way, your table of oven temperatures may list 300 as "very moderate" rather than "slow" or "low." The point to remember after all is just 300 for beef rib and leg of lamb.) As for pork roasts, pork loin roasts, they need a little more heat -- 50 degrees more, so the Missouri people found. For pork loin they recommend a temperature of about 350 degrees Fahrenheit. (Your cookbook may call that "moderate.")

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According to the Missouri findings, an oven higher than 300 or 350 may roast the meat in a shorter time but takes more gas or other fuel for the job. And at a higher temperature the roast loses more -- loses juice and shrinks. So the cost of the meat is more than when cooked at low constant temperature.

Texas and Kansas agree with Missouri in recommending low steady heat for roasting. At the Texas State Experiment Station they cooked beef roasts and ham at high and low heat. And they found that generally the lower heat gave the most tender roasts. At the Kansas Station they found that lower heat not only gave a more tender roast but that it gave more even doneness. Because the roast shrank less at the lower temperature, they gave more slices than those cooked at a higher heat.

Here's a question from a listener who is interested in the proper cooking of veal roasts. She asks: "Should a veal shoulder roast be cooked in a covered roaster or in an open pan on a rack?"

Let's refer this query to the North Dakota Station where they've made a special study of veal roasts.

The standard method of roasting veal as adopted by the cooperative meat investigators of the different States has been this -- until recently: Searing the meat at 525 degrees Fahrenheit (broiling temperature) for 20 minutes followed by slow cooking in a covered roaster at 250 degrees ("slow" oven) until the thermometer in the roast registers 71 degrees Centigrade. (You notice that the roast was covered after searing. The reason given for using a cover was that veal contains very little fat, so the steam or moist heat of cooking under a cover helps prevent it from becoming dry.)

But now since these recent tests at North Dakota, opinions about keeping veal under cover seem to have changed. The North Dakota people found that a roast of veal in an open pan cooked at a constant temperature of 300 to 325 degrees Fahrenheit came out with a nice reddish brown color and a pronounced and desirable flavor -- came out a better roast than with the standard method. Roasts cooked in an open pan this way lost less than when they were seared first. But they took somewhat longer to cook -- from 3 to 5 minutes a pound.

The listeners who have asked about ways to save on their fuel bills in cooking meat may also be interested in some further news from North Dakota. The scientists there believe in cooking small cuts of meat or tough cuts in a Dutch oven or a heavy kettle on top of the stove. They say that top-stove cooking will save as much as seven-eighths of the fuel used in oven roasting. So if you are cooking for just 2 or 3, say, -- if you are cooking little roasts, or dishes like veal birds or rolled roasts, you'll save gas (or electricity or oil or gasoline, whatever fuel you cook by) if you put your heavy kettle on top of the stove instead of the oven. The same is true for pot roasts and all braised dishes. And the North Dakota people advise using the drippings in the kettle -- all the drippings for gravy so you won't miss any of the flavor and goodness of the meat.
